

IN THE CLAIMS

This listing of the claims supercedes all previous versions. Please amend the claims as indicated below.

1. (Currently Amended) An apparatus for ~~dynamically controlling the elevation and azimuth of~~ an aerial gun ~~incorporated within a gun pod mountable on a fixed-wing aerial-combat vehicle,~~ the apparatus comprising ~~the elements of:~~

~~a t least one aerodynamically gun pod unit for storing, delivering, controlling and supporting at least one controllable elevation and azimuth movement aerial~~ controlling the aerial gun unit, the aerial gun being mounted in the gun pod and designed for the delivery of suitable gun projectile units to a target;

~~at least one controllable movement aerial gun unit mounted in the at least one aerodynamically efficient gun pod unit and designed for the delivery of suitable gun projectile units to a target;~~ wherein the aerial gun in a direction that is independent from the direction of the aerial-combat vehicle.

2. (Currently Amended) The apparatus as claimed in claim 1 further ~~comprises~~ comprising a gun movement control device to effect controllably the movement of the ~~at least one aerial gun unit.~~

3. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one aerodynamically efficient gun pod unit~~ comprises ~~the elements of:~~

a gun movement controller;

a moveable gun mount device that supports the aerial gun and effects movement of the aerial gun in accordance with control signals received from the gun movement controller;

an at least one actuator device to respond to control signals transmitted by the gun movement controller means and impart movement to the at least one moveable gun mount device;

~~at least one moveable gun mount device to support the controllable movement gun~~ aerial gun unit and effect the movement of the aerial gun unit in accordance with the control signals received from the gun movement control means;

an extended gun pod aperture to provide suitable gun barrel movement volume to the ~~at least one~~ aerial gun ~~unit~~; and

a gun pod aperture covering to prevent air stream ingress ~~of the air stream~~ into the ~~at least one~~ gun pod ~~unit~~ and to maintain efficient airflow in the vicinity of the ~~at least one~~ gun pod ~~unit~~.

4. (Currently Amended) The apparatus as claimed in claim 3 wherein the ~~at least one~~ gun pod ~~unit~~ is provided with suitable internal and external structure, component configuration, diameter and volume to allow for ~~the~~ controllable movement of the ~~at least one~~ aerial gun ~~unit~~.

5. (Currently Amended) The apparatus as claimed in claim 3 wherein the ~~at least one~~ gun pod ~~unit~~ is capable of supporting ~~the~~ loads resulting from the high-speed, high-performance maneuvering of the fixed-wing aerial combat vehicle involving substantial G forces in accordance with the pre-determined flight envelope of the vehicle.

6. (Currently Amended) The apparatus as claimed in claim 3 wherein ~~the~~ an internal and external structure, component configuration, diameter and volume of the ~~at least one~~ gun pod ~~unit~~ are factors in determining ~~the~~ a ranges of ~~the~~ controllable movement provided for the ~~at least one~~ aerial gun ~~unit~~.

7. (Currently Amended) The apparatus as claimed in claim 3 wherein the ~~at least one~~ gun pod ~~unit~~ is ~~having a minimal impact on~~ impacts minimally the aerodynamic efficiency, stability and handling characteristics of the fixed-wing aerial combat vehicle.

8. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one~~ gun pod ~~unit~~ is ~~preferably~~ mounted on a center fuselage hard point of the fixed-wing aerial combat vehicle.

9. (Currently Amended) The apparatus as claimed in claim ~~8~~ 1 wherein the ~~at least one~~ gun pod ~~unit~~ is mountable on diversely located hard points of the fixed-wing aerial combat vehicle.

10. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one~~ gun pod ~~unit~~ is an element in ~~the~~ a weapon configuration of the fixed-wing aerial combat vehicle.

11. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one controllable movement~~ aerial gun unit is provided with an allowable range of controllable direction ~~movement in the elevation and in the azimuth~~.

12. (Currently Amended) The apparatus as claimed in claim 1 wherein the allowable ranges of ~~movement in the elevation and the azimuth are~~ controllable direction is determined by the type of fixed-wing aerial combat vehicle, by the weapon configuration of the fixed-wing aerial combat vehicle, by ~~the a~~ flight envelope of the fixed-wing aerial combat vehicle, by the characteristics of the ~~at least one~~ gun pod unit, by the characteristics of the ~~at least one~~ aerial gun unit and by the location of ~~the a~~ hard point whereon the ~~at least one~~ gun pod point unit is mounted.

13. (Currently Amended) The apparatus as claimed in claim 11 wherein the allowable ranges of ~~movement~~ controllable direction is ~~in the elevation and azimuth are~~ determined and modified dynamically in-flight in accordance with ~~the a~~ position of the fixed-wing aerial combat vehicle ~~aerial vehicle~~ in relation to ~~the vehicle's~~ the flight envelope of said fixed-wing aerial combat vehicle, load factor, outside air pressure and the envelope of a maneuver's maneuver being performed by said fixed-wing aerial combat vehicle ~~envelope~~.

14. (Currently Amended) The apparatus as claimed in claim 11 wherein the allowable range of controllable direction ~~movement in the elevation and the azimuth~~ for the ~~at least one~~ aerial gun unit ~~are~~ is pre-determined.

15. (Currently Amended) The apparatus as claimed in claim 11 wherein the allowable range of controllable direction is ~~movement in the elevation and in the azimuth are~~ dynamically determined and modified in-flight.

16. (Original) The apparatus as claimed in claim 1 wherein the fixed-wing aerial combat vehicle is an attack, trainer, A/A or a multi-role military aircraft.

17. (Currently Amended) The apparatus as claimed in claim 1 wherein the fixed-wing aerial combat ~~aircraft~~ vehicle is an unmanned combat aerial vehicle.

18. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one~~ gun pod ~~unit~~ is fixedly mounted on the fixed-wing aerial combat vehicle.

19. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one~~ gun pod ~~unit mounted on the fixed-wing aerial combat vehicle~~ has a minimal controllable movement capability.

20. (Currently Amended) The apparatus as claimed in claim 3 wherein the ~~at least one~~ gun pod ~~unit~~ provides storage, delivery, control and support functions for precision-guided munitions.
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21. (Currently Amended) The apparatus as claimed in claim 19 wherein the ~~at least one~~ gun pod ~~unit~~ provides storage, delivery, control and support functions for electronic countermeasure devices.

22. (Currently Amended) The apparatus as claimed in claim 3 wherein the ~~at least one~~ gun pod ~~unit~~ further comprises ~~the elements of:~~
~~at least one~~ a range finder device to measure continuously ~~the~~ a range between the gun pod ~~unit~~ and a target during an aerial engagement;
~~at least one~~ a processor device to perform aerial gun movement and aiming control calculations;
~~at least one~~ a sensor device to capture environmental and weapon data;
~~at least one~~ a gun movement control and feedback device to receive control signals from the gun movement controller ~~means~~, activate ~~the~~ a gun mount actuators and handle feedback information from the moveable gun mount devices, and the gun mount actuators.

23. (Currently Amended) The apparatus as claimed in claim 1 wherein the ~~at least one~~ aerial gun ~~unit~~ is a M61A1 20-mm gun.

24. (Currently Amended) The apparatus as claimed in claim 22 wherein the ~~at least one~~ aerial gun ~~unit~~ is a DEFA 30-mm gun.

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25. (Currently Amended) The apparatus as claimed in claim 11 wherein the allowable ~~angle of movement in the range of controllable direction is movement in the elevation is about~~ between 5 degrees to about 70 degrees.

26 - 41. (Cancelled)

42. (New) The apparatus as claimed in claim 1 wherein the direction of the at least one gun being controlled is selected from the group consisting of azimuth, elevation, and a combination thereof.